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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,559	02/05/2002	C. Grant Willson	5119-07301	6950

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EXAMINER

BEISNER, WILLIAM H

ART UNIT PAPER NUMBER

1744

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/068,559	<b>Applicant(s)</b> WILLSON ET AL.	
	<b>Examiner</b> William H. Beisner	<b>Art Unit</b> 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2005 and 28 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 50, 76 and 98-118 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 50, 76 and 98-118 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/7/05 &amp; 2/28/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/7/2005 has been entered.

### ***Information Disclosure Statement***

2. The information disclosure statements filed 2/7/2005 and 2/28/2005 have been considered and made of record.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 50, 76 and 98-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt et al.(US 6,327,410) in view of Felder et al.(US 6,232,066), Chang et al.(US 6,350,620) or Ravkin et al.(US 2003/0008323).

The reference of Walt et al. discloses a method of sensing multiple analytes in a fluid that includes passing a fluid over a sensor array wherein the sensor array includes a plurality of sensing elements coupled to a supporting member, wherein a first portion of the sensing elements are configured to produce a signal in the presence of a first analyte and wherein a second portion of the sensing elements are configured to produce a signal in the presence of a second analyte. The first and second portions of the sensing elements have unique predetermined optical signatures or tags wherein the optical signature or tag of the first portion of sensing elements is different from the optical signature or tag of the second portion of sensing elements. The method includes monitoring a spectroscopic change of the sensing elements as the fluid is passed over the sensing array, wherein the spectroscopic change is caused by the

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interaction of the analyte with the sensing element and determining the unique optical signature of the sensing elements that undergo a spectroscopic change (See column 13, lines 8-24, and column 15, line 64, to column 16, line 20).

With respect to claim 76, while the reference of Walt et al. disclose the use of unique predetermined optical signatures or tags that include the use of beads of different size (See column 18, lines 48-58, and column 19, lines 6-13), claim 76 differs by reciting that the method employs sensing elements (beads) of different shapes wherein the sensing element undergoing a spectroscopic change is identified by its shape.

The reference of Felder et al. discloses that it is known in the art to provide analyte detection beads with unique optical signatures or tags wherein the beads can be of different size or shape (See column 8, lines 49-56).

The reference of Chang et al. discloses that it is known in the art to provide analyte detection beads with unique optical signatures or tags wherein the beads can be of different size or shape (See column 3, lines 33-39).

The reference of Ravkin et al. discloses that it is known in the art to provide analyte detection beads with unique optical signatures or tags wherein the beads can be of different size or shape (See paragraphs [0096], [0137] and [0139]).

In view of any of these teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a unique optical signature with respect to the beads of the primary reference of Walt et al. using beads of different shapes for the known and expected result of providing an alternative means recognized in the art to achieve the same result, providing a means for optically distinguishing one sensing element from another. Use of

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beads of different shape rather than size would eliminate the need to employ different sized optical fibers required to detect the beads of different size. The same types of optical fibers would be capable of detecting beads of similar size but different shapes.

With respect to claim 109, the sensing elements comprise a polymer (See column 7, lines 20-41).

With respect to claim 110, the reference of Walt et al. discloses that the sensing elements can be made of polyethylene glycol hydrogel (See column 18, lines 3-20).

With respect to claims 111-118, the reference of Walt et al. discloses a number of receptors that can be used and produce a signal when they interact with an analyte. The reference also discloses a number of method for attachment of the receptor to the sensing element. The reference stresses that the method of attachment should not alter the functionality of the bioactive agent (See column 7, line 55, to column 12, line 62).

With respect to claim 50, the reference of Walt et al. discloses that immobilization of the different sensing elements to substrate (212) to form a sensing array includes placing the sensing elements in a liquid composition and curing the liquid composition to form a supporting member, wherein the sensing elements are at least partially embedded within the cured liquid composition (See column 17, line 47, to column 18, line 2).

With respect to claims 98 and 100, the reference of Walt et al. discloses that the sensing elements can be made from a polymer (See column 7, lines 20-41).

With respect to claim 99, the sensing elements are placed near the surface of the liquid composition (See column 17, line 47, to column 18, line 2).

With respect to claim 101, the reference of Walt et al. discloses that the sensing elements can be made of polyethylene glycol hydrogel (See column 18, lines 3-20).

With respect to claims 102-108, the reference of Walt et al. discloses a number of receptors that can be used and produce a signal when they interact with an analyte. The reference also discloses a number of method for attachment of the receptor to the sensing element. The reference stresses that the method of attachment should not alter the functionality of the bioactive agent (See column 7, line 55, to column 12, line 62).

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 76 and 109-118 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 117-143 of copending Application No. 10/832,469 in view of Walt et al.(US 6,327,410).

Claims 117-143 of copending 10/832,469 encompass a method that is substantially the same as that instantly claimed. Any of the minor differences between the instant claims that are

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not encompassed by the limitations of copending claims 117-143 would have been obvious in view of the reference of Walt et al. for the same reasons as set forth in the 35 USC 103 rejection set forth above.

9. This is a provisional obviousness-type double patenting rejection.

### ***Response to Arguments***

10. Applicant's arguments and associated amendments, see pages 6-8, filed 2/7/2005, with respect to claims 1-23 and 97 have been fully considered and are persuasive. The rejection of the claims has been withdrawn since the claims have been canceled.

11. The indicated allowability of claims 50 and 76 is withdrawn in view of the newly discovered reference(s) to Walt et al.(US 6,327,410) in view of any of Felder et al.(US 6,232,066), Chang et al.(US 6,350,620) or Ravkin et al.(US 2003/0008323). Rejections based on the newly cited reference(s) have been set forth above in the 35 USC 103 section of the office action.

### ***Conclusion***


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William H. Beisner  
Primary Examiner  
Art Unit 1744

WHB